

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Mid-Rivers Telephone Fiber Optic Cable Easements
Proposed Implementation Date:	Spring/Summer 2018
Proponent:	Mid-Rivers Telephone Cooperative
Location:	Section 16, Township 6 North, Range 24 East Section 36, Township 7 North, Range 23 East
County:	Musselshell County

I. TYPE AND PURPOSE OF ACTION

Mid-Rivers Telephone Cooperative is applying for 16' easements on two parcels of Trust land in Musselshell County for the construction and maintenance of a fiber optic cable as described below:

- Section 16-T6N-R24E: The proposed 0.131-acre easement would run directly adjacent to and along the east side of Mathison Road.
- Section 36-T7N-R23E: The proposed 1.76-acre easement would run parallel to and along the south side of Highway 12 in the N2 of Section 36.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

No formal public scoping was performed by DNRC for this proposed project. A Settlement of Damages form was obtained from the grazing lessees.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

None.

3. ALTERNATIVES CONSIDERED:

Proposed Alternative: Approve the request to issue 16' easements to Mid-Rivers Telephone Cooperative for the underground installation of fiber optic cable on the two sections listed above in Musselshell County.

No Action Alternative: Deny the request to issue 16' easements to Mid-Rivers Telephone Cooperative for the underground installation of fiber optic cable on the two sections listed above in Musselshell County.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The routes proposed in the easements generally parallel existing roads. Based on the proposed action and relatively short disturbance time for cable installation, no significant adverse impacts to geology and soils are

expected by implementing the proposed action. The soils in the easement area are mainly compromised of clay and sandy loam soils. The NRCS Soil Survey does indicate that there are some limitations in both soils for shallow excavations and they include such potential issues as unstable excavation walls and dusty tendencies. However, these issues are not expected to significantly impact the proposed action.

No significant adverse impacts to geology and soil quality, stability and moisture are expected from implementing the proposed action.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

The proposed easement locations do not cross any streams or bodies of water.

No significant adverse impacts to water quality, quantity or distribution are expected from implementing the proposed action.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

There may be short-term isolated impacts from the equipment exhaust that is used to install the fiber optic cable.

No significant impact to air quality is expected from implementation of the proposed action.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The cable is proposed to be installed using a tractor-crawler and friction-type plow blade that will create a soil disturbance approximately 36 inches deep and 6 inches wide and then the ground will be compacted back after the cable is installed. The area disturbed by the trenching activity and from vehicle travel could have short term impacts on vegetation.

No significant adverse impacts to vegetative cover, quantity or quality are expected as a result of implementing the proposed alternative.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

No significant impacts to terrestrial, avian and aquatic life and habitats are expected to occur as a result of implementing the proposed alternative.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

A search of the Montana Natural Heritage Program database indicated the following:

Section 16-T6N-R24E: There were no species of concern identified on this section.

Section 36-T7N-R23E: Five species of concern were identified through the Montana Natural Heritage Program database search. They were the Great Blue Heron, Spiny Softshell, Great Plains Toad, Plains Spadefoot, and Northern Redbelly Dace. No significant adverse impacts to any of the species listed above are expected as a result of the proposed project. This is because the proposed route of the fiber optic cable is directly adjacent to Highway 12. Because the proposed route is so near a highway, it is unlikely that any of the listed species would traverse this area. If any of the species listed above were to traverse this section, they would be temporarily displaced during construction of the proposed project.

Section 36 was identified to be within General Habitat for the Greater Sage Grouse. Mid-Rivers consulted the Montana Sage Grouse Oversight Team (MSGOT) in regard to the proposed project. Attached is a copy of the recommendations letter that Mid-Rivers received from MSGOT. MSGOT recommended that all segments of the project within General Habitat implement weed management. MSGOT recommended that reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicas*).

Due to the nature of the proposed action, the installation of underground fiber optic cable, it is not expected that this action will have any significant adverse impacts to any of the species identified on or around these two parcels. The surface disturbance will be temporary and adjacent to existing roads.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search revealed that no cultural or paleontological resources have been identified in the APE. Because the area of potential effect on state land is fully disturbed with past road construction (road borrow ditch), no additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

A site visit was completed on 13 December 2017 by SLO Land Use Specialist Jocee Hedrick and SLO Area Planner Jeff Bollman. Visual inspections were performed and no cultural resources were noted. No significant adverse impact to historic or archaeological sites is expected because of implementing the proposed alternative.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The proposed action would result in the installation of underground fiber optic cable adjacent to existing roads. Once the easement areas are rehabbed from the disturbance due to the installation, the only indication that there is an underground fiber optic line would be from any above-ground warning markers. Therefore, no significant adverse impact to aesthetics is expected as a result of implementing the proposed alternative.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

No significant adverse impacts to environmental resources of land, water, air or energy are expected to occur as a result of implementing the proposed alternative.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

There are no other known studies or future government actions planned for these three Trust parcels.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

No significant adverse impacts to human health and safety are expected to occur as a result of implementing the proposed alternative.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

The location of the easements does not traverse any crop lands. A signed Lessee Settlement form for both Trust parcels was included in the proposed easement application materials. No significant adverse impacts to industrial, commercial and agricultural activities and production are expected to occur as a result of implementing the proposed alternative.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

The proposed action will not have a significant impact on the quantity and distribution of employment.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

The proposed action will not have an adverse impact on tax revenue.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services

The implementation of the proposed alternative will not generate any additional demands on governmental services.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

Implementation of the proposed alternative will not conflict with any locally adopted plans.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

Both parcels currently have public access. The installation is expected to occur in the spring/summer of 2018 prior to the start of rifle and archery hunting seasons. Impacts due to installation should be minimal considering the easements run parallel to existing roads. The implementation of the proposed alternative is not expected to have an adverse impact on the ability of recreational use of these Trust lands.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

No significant adverse impacts to density and distribution of population and housing would occur as a result of implementing the proposed alternative.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

There are no native, unique or traditional lifestyles or communities in the vicinity that would be impacted by the proposed alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

The proposed alternative will not have a significant adverse impact on cultural uniqueness or diversity.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The State benefited by getting a total one-time fee of \$1515.00 from Mid-Rivers Telephone Cooperative for the purchase of the easements on these two Trust parcels. The Common Schools Trust will be the beneficiary of this payment.

EA Checklist Prepared By:	Name: Jocee Hedrick	Date: 2/16/18
	Title: Land Use Specialist, Southern Land Office	

V. FINDING

25. ALTERNATIVE SELECTED:

The proposed alternative has been selected and it is recommended that permanent 16' easements be granted to Mid-Rivers Telephone Cooperative for the purpose of installing underground fiber optic cable on the following parcels:

- Section 16, Township 6 North, Range 24 East
- Section 36, Township 7 North, Range 23 East

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

The potential for significant adverse impacts to the Trust lands listed above are minimal due to the nature of the proposed action which would entail the issuing of the easements and installation of underground fiber optic cable. There are no natural features that could produce adverse impacts or species of concern occupying the parcels that are expected to be impacted by implementing the proposed action.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

☐


EIS

☐

More Detailed EA

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No Further Analysis

EA Checklist Approved By:	Name: Matthew Wolcott
	Title: Area Manager, Southern Land Office
Signature: 	
Date: 2/20/2018	

MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM



STEVE BULLOCK, GOVERNOR

1539 ELEVENTH AVENUE

STATE OF MONTANA

PHONE: (406) 444-0554
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PO BOX 201601
HELENA, MONTANA 59620-1601

Project No. 2679
Governor's Executive Orders 12-2015 and 21-2015
Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural

Brian Steiner
KLJ Engineering
3203 32nd Avenue South, Suite 201
Fargo, ND 58106

January 16, 2018

Dear Mr. Steiner,

The Montana Sage Grouse Habitat Conservation Program received a request for consultation and review of your project or proposed activity on December 21, 2017. Based on the information provided, all or a portion of this project is located within a Core Area or General Habitat for sage grouse. The Bureau of Land Management (BLM) classifies this area as a Priority Habitat Management Area (PHMA) or a General Habitat Management Area (GHMA).

Executive Orders 12-2015 and 21-2015 set forth Montana's Sage Grouse Conservation Strategy. Montana's goal is to maintain viable sage grouse populations and conserve habitat so that Montana maintains flexibility to manage our own lands, our wildlife, and our economy and a listing under the federal Endangered Species Act is not warranted in the future. Similarly, BLM has incorporated sage grouse conservation measures into their Resource Management Plans.

The program has completed its review, including:

Project Description:

Project Type: Infrastructure – Communication

Project Disturbance: 7.35 Acres/60.6 Miles

Construction Dates: April 2018 to December 2018, Temporary (< 1 Year)

Disturbance Duration: April 2018 to June 2019, Short Term (1-5 Years)

Project Location:

Legal: Township 5 North, Range 22 East, Section 1
Township 5 North, Range 23 East, Sections 5, 6, 8



Hosted by the Montana Department of Natural Resources and Conservation
Director's Office: (406) 444-2074



Township 6 North, Range 22 East, Sections 1, 2, 11, 12, 13, 14, 24 and 36
Township 6 North, Range 23 East, Sections 2, 3, 4, 5, 6, 9, 10, 30 and 31
Township 7 North, Range 22 East, Sections 35 and 36
Township 7 North, Range 23 East, Sections 25, 31, 32, 35 and 36
Township 7 North, Range 24 East, Sections 17, 20, 29, 30 and 31

County: Golden Valley, Musselshell

Ownership: Private, Bureau of Land Management and State Trust Land

Executive Orders 12-2015 and 21-2015 Consistency:

The project proposes to replace telephone lines in designated Core Area and General Habitat for sage grouse.

This project includes the entire overbuild of the Lavina Telephone Exchange and parts of the Roundup and Ryegate Exchanges, replacing the existing copper lines with new fiber optic cables in those areas. The location of the project extends into parts of Golden Valley and Musselshell counties. See Project No. 2679 Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Project Segments by Executive Order (EO) Habitat Map 1.

The 60.6-mile route will result in approximately a one-foot-wide temporary disturbance. The fiber optic cable will primarily be buried using the plowing method wherever possible and the boring method wherever plowing is not possible. Trenching will only be used to transition from plowing to boring. All new cable that will be placed within city limits or where meeting a water crossing will be placed using the boring method. The majority of the cable will be placed within existing road right-of-ways, with a few exceptions where there is no existing right-of-way and a new cable must be brought to connect to a home. Situations may occur where the terrain dictates that the route cannot follow the road for that segment. In these cases, a new right of way will be obtained.

Based on the information you provided, nine segments of your project are within two miles of an active sage grouse lek. See Project 2679 Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Project Segments within Two-Miles of a Sage Grouse Lek Map 2.

Segments Outside of Designated Executive Order 12-2015 Sage Grouse Habitat:

Project Description - Segments Outside of Designated Executive Order 12-2015 Sage Grouse Habitat. All or a portion of the segments colored yellow, shown on the Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Project Segments by EO Habitat Map 1.



Recommendations for Segments Outside of Designated Sage Grouse Habitat:

- Based on the information you provided, the segments of your project identified above, are located outside of sage grouse habitat designated as a Core Area, General Habitat, or a Connectivity Area for purposes of conservation. Accordingly, they are not subject to Executive Orders 12-2015 and 21-2015, which set forth Montana's Sage Grouse Conservation Strategy.

Segments Within General Habitat for Sage Grouse:

Project Description - Segments Within General Habitat for Sage Grouse Greater Than Two Miles From a Sage Grouse Lek. See all or a portion of segments colored green, shown on the Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Project Segments by EO Habitat Map 1.

Recommendations for All Segments Within General Habitat for Sage Grouse:

- Weed management is required within General Habitat for sage grouse. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicas*).

Segments Within General Habitat and Within Two Miles of an Active Sage Grouse Lek. See all or portion of segments colored purple, shown on the Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Project Segments within Two-Miles of a Sage Grouse Lek Map 2.

Recommendations for Segments Within Two-Miles of an Active Sage Grouse Lek.

The segments of your project identified in purple, are within two miles of an active sage grouse lek. Activities may be allowed during seasonal closure periods as determined on a case-by-case basis. Ordinarily, certain seasonal stipulations would apply. The Program has considered the feasibility of timing your activities so that no construction would occur between the hours of 4:00 and 8:00 a.m. and 7:00 and 10:00 p.m. until July 15, 2018. For the reasons below, the Program has determined that the proposed project will not have a detrimental impact on sage grouse populations providing construction activities abide by the time-of-day stipulations to avoid disturbing the nearby lek.

- The project activity will occur within existing right-of-way's along existing roads.
- The disturbance caused by the construction activity for this project is temporary.
- There appears to be sufficient topography between the lek and the proposed activity to minimize noise disturbance to birds.



Segments Within Core Habitat for Sage Grouse:

Project Description - Segments Within a Core Area for Sage Grouse. See all or a portion of segments colored blue, shown on the Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Project Segments by EO Habitat Map 1.

Density Disturbance Calculation Tool (DDCT) Analysis:

A portion of the proposed project is to occur in a designated Core Area for sage grouse. The Program has calculated the density and disturbance levels within the project area using a Density Disturbance Calculation Tool.

The results were compared to allowable thresholds set forth in the Executive Order 12-2015. Your project results are as follows. See Project 2679 Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Density Disturbance Calculation Tool Analysis Area Map 3 and Density Disturbance Calculation Tool Explanation and Results Summary.

DDCT Analysis Area Acres: 39,960.65
Total Preliminary Disturbance Acres: 0.28
Total Disturbed Acres in Analysis Area: 1344.54
DDCT Result: 3.36%
New Disturbed Acres: 0.23
Affected Leks Within the DDCT Analysis Area: 3

Recommendations for Segments Within a Core Area for Sage Grouse:

The State of Montana appreciates and welcomes the opportunity to collaborate with BLM to implement Executive Orders 12-2015 and 21-2015 and the BLM land use plans, respectively. We have a shared goal to conserve sage grouse and the habitats upon which they depend, consistent with the "all lands, all hands, all threats" approach.

The following stipulations are taken from Montana Executive Order 12-2015. These stipulations are designed to maintain existing levels of suitable sage grouse habitat by managing uses and activities in sage grouse habitat to ensure the maintenance of sage grouse abundance and distribution in Montana. Development should be designed and managed to maintain populations and sage grouse habitats.

- Weed management is required within Core Area Habitat for sage grouse. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicas*).



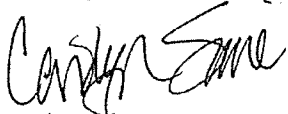
I encourage BLM to give full consideration to guidance within its own land use plans with respect to sage grouse and implement any special considerations or stipulations consistent with Montana Executive Order 12-2015 as appropriate.

Your activities are consistent with the Montana Sage Grouse Conservation Strategy. Your proposed project or activity may need to obtain additional permits or authorization from other Montana state agencies or possibly federal agencies. They are very likely to request a copy of this consultation letter, so please retain it for your records.

Please be aware that if the location or boundaries of your proposed project or activity change in the future, or if new activities are proposed within one of the designated sage grouse habitat areas, please visit <https://sagegrouse.mt.gov/projects/> and submit the new information.

Thanks for your interest in sage grouse and your commitment to taking the steps necessary to ensure Montana's Sage Grouse Conservation Strategy is successful.

Sincerely,



Carolyn Sime
Montana Sage Grouse Habitat Conservation Program Manager

Enclosures:

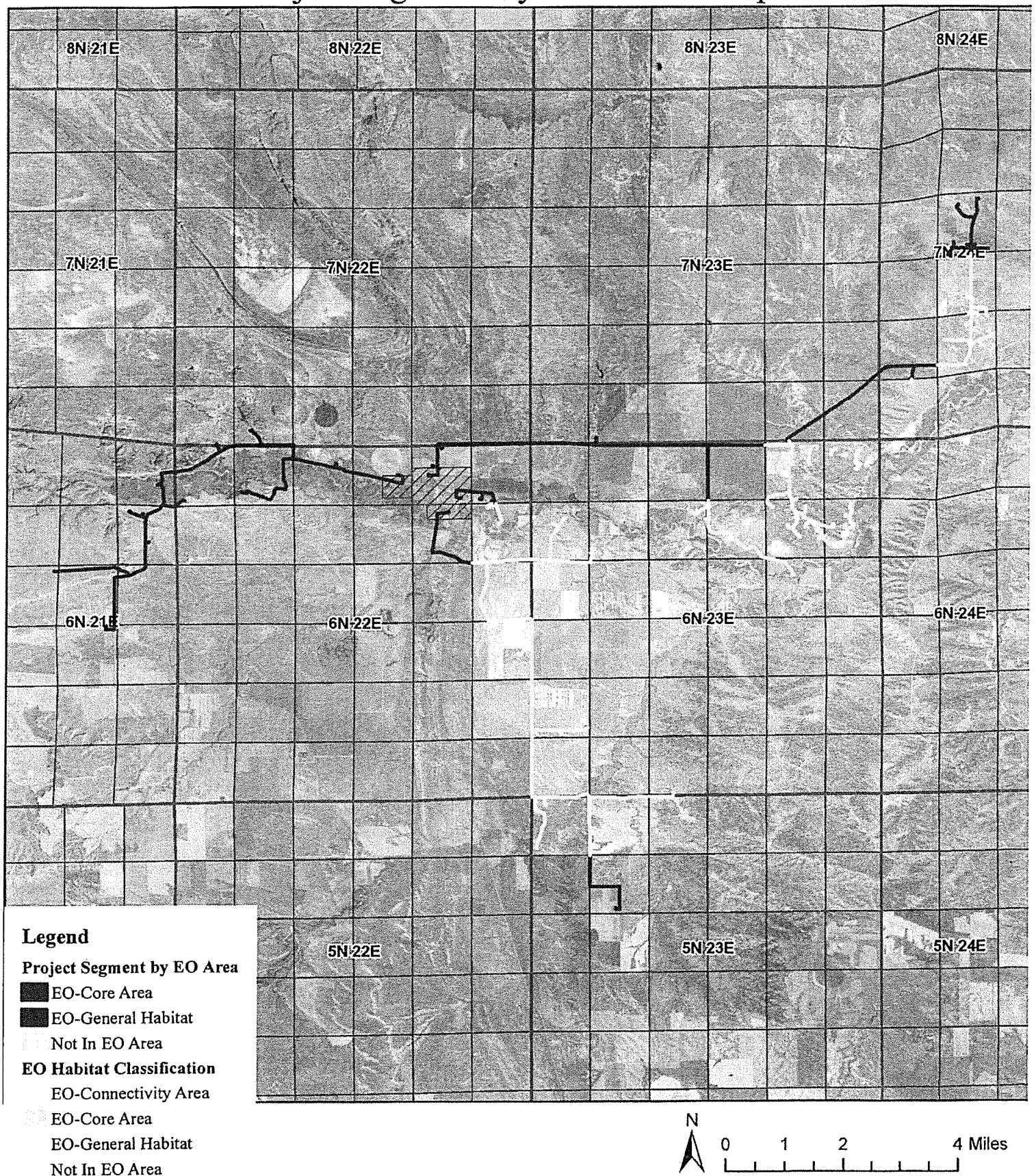
- 1) Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Project Segments by EO Habitat Map 1
- 2) Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Project Segments within Two-Miles of a Sage Grouse Lek Map 2
- 3) Project 2679 Lavina, North Ryegate and Roundup Exchanges 2018 Lavina Town and Rural Density Disturbance Calculation Tool Analysis Area Map 3
- 4) Density Disturbance Calculation Tool Explanation and Results Summary.

cc: Shawn Thomas
DNRC-Trust Land Management Administrator
P.O. Box 201601
Helena, MT 59620-1601

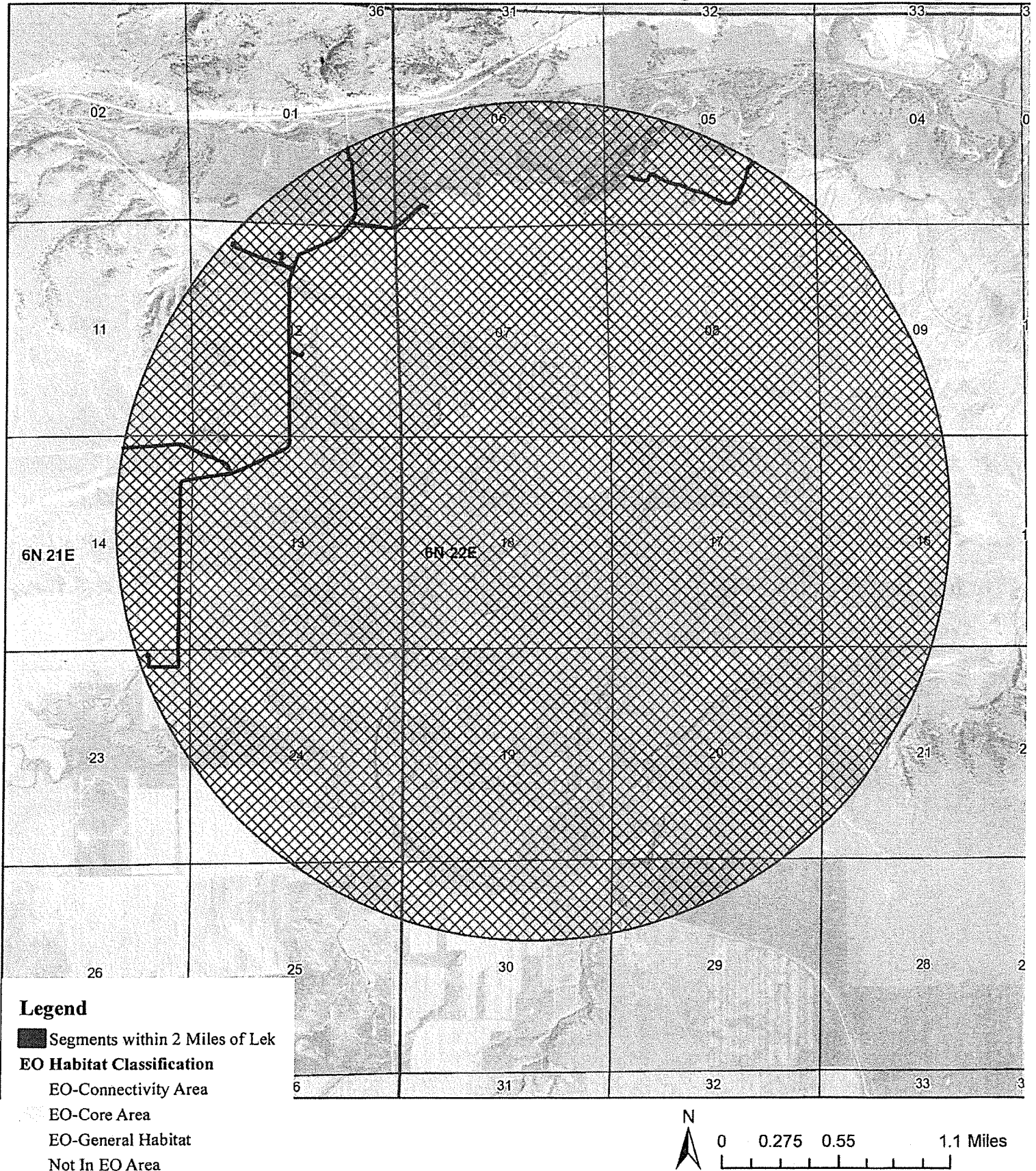
cc: John C. Carlson
Management Zone 1 Greater Sage-Grouse Lead
Bureau of Land Management
Montana/Dakotas State Office
5001 Southgate Drive
Billings, MT 59101-4669



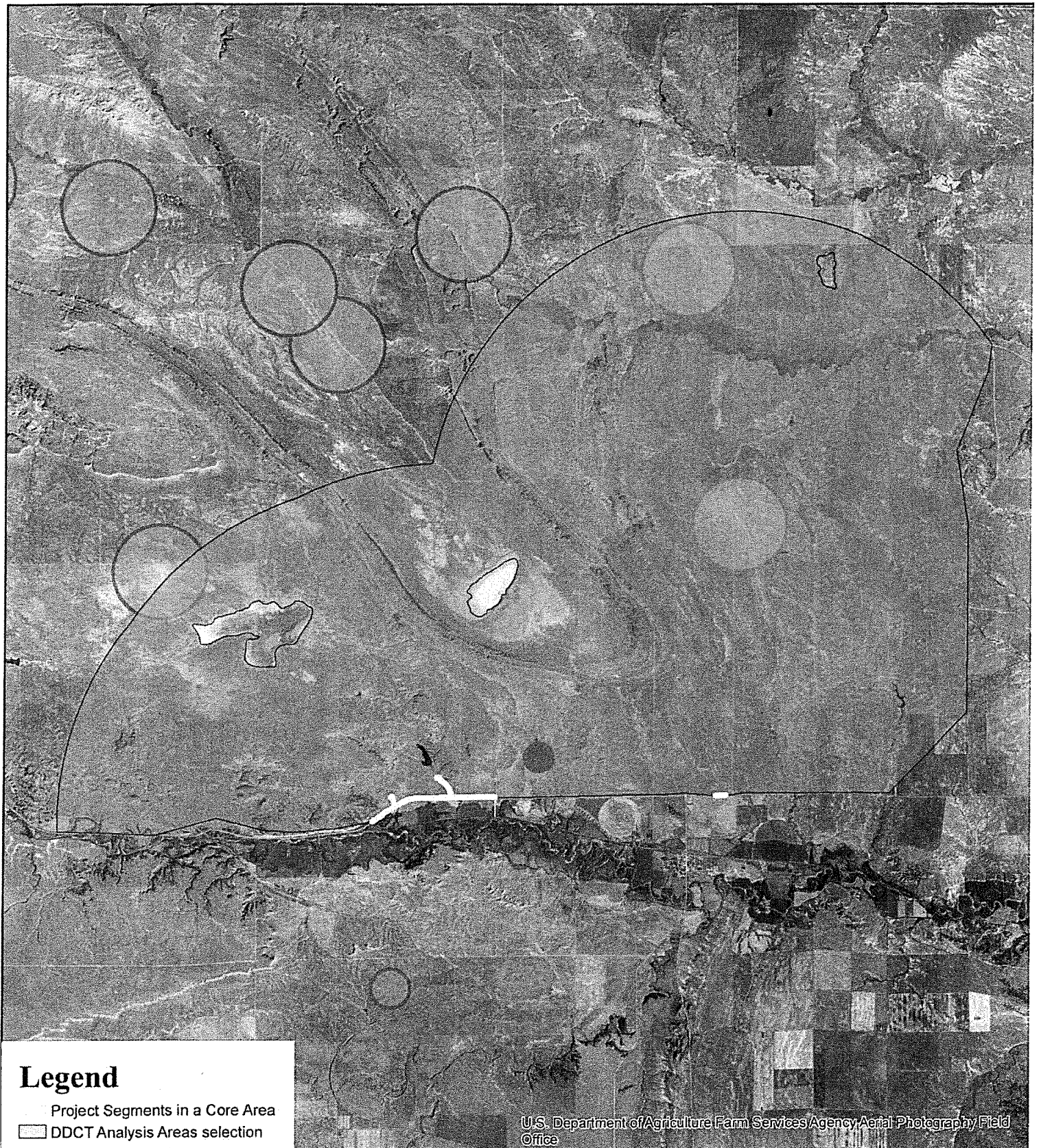
Project No. 2679
Lavina, North Ryegate and Roundup Exchanges
2018 Lavina Town and Rural
Project Segments by EO Habitat Map 1



Project No. 2679
Lavina, North Ryegate and Roundup Exchanges
2018 Lavina Town and Rural
Project Segments Within Two Miles of a Sage Grouse Lek Map 2



Project 2679 Lavina, North Ryegate and Roundup Exchanges
2018 Lavina Town and Rural
Density Disturbance Calculation Tool Analysis Area Map 3



Legend

- Project Segments in a Core Area
- DDCT Analysis Areas selection
- EO-Connectivity Area
- EO-Core Area
- EO-General Habitat
- Not In EO Area



0 0.75 1.5 3 Miles

Density Disturbance Calculation Tool Explanation and Results

[#2679] Lavina, North Ryegate & Roundup Exchanges 2018 Lavina Town & rural

Created on 12/21/2017 8:59 AM

Project stage changed from Draft to Due Diligence.

Results are based on the data submitted by the proponent. DDCT calculation results are as follows.

DDCT Analysis Area	Proposed Disturbances Area	Existing + Proposed Disturbances Area within DDCT Analysis Area	DDCT Result	New disturbed acres	Affected Leks within the DDCT Analysis Area
39,960.65 acres	0.28 acres	1,344.54 acres	3.36%	0.23 acres	3

Result calculated on 12/21/2017 8:59 AM

Analysis Process and General Definitions

Existing Disturbances: All surface disturbances existing on the ground prior to any Proposed Disturbances that would be created by a new project.

Preliminary Disturbances: All surface disturbances associated with this project, as submitted to the Projects On-line Tool.

Total Preliminary Disturbance Acres: The number of acres contained within the entire polygon(s) delineating the disturbance area of this proponent's project.

Previously Proposed Disturbances: All Preliminary Disturbances proposed by other people prior to the current Preliminary Disturbance being submitted. Once a Preliminary Disturbance is finalized, the disturbance becomes an Existing Disturbance.

DDCT Analysis Area Acres: The number of acres within a polygon created by the following steps:

1. Map the *Preliminary Disturbance* polygon submitted by proponent.
2. Classify the habitat where proposed *Preliminary Disturbance* would occur: core area, general habitat, connectivity area, outside the Executive Order (none of the above). May include unsuitable habitat.
3. Buffer *Preliminary Disturbance/s* that would only occur in core habitat by four miles.
4. Look to see if the 4-mile buffer includes any active leks.
5. If yes, buffer those leks by four miles and add the acres to the polygon.
6. Remove any portion of the polygon that is not classified as core habitat so the DDCT Analysis Area only contains acres in core habitat.
7. Finalize the polygon. This is the DDCT Analysis Area polygon.
8. Calculate the number of acres in the DDCT analysis area polygon.

Total Disturbed Acres in DDCT Analysis Area: The total number of acres of disturbance within the DDCT Analysis Area polygon: all Existing Disturbances + Previously Proposed Disturbances + current Preliminary Disturbance.

DDCT Result: The Total Disturbed in DDCT Analysis Area acres divided by the DDCT Analysis Area acres x 100 to determine the percent disturbance which is compared to Executive Order 12-2015 5% disturbance threshold for core areas.

New Disturbed Acres: the total of new ground disturbance as a result of the project. This is portion of Preliminary Disturbances that do not overlap with already Existing Disturbances or Previously Proposed Disturbances. Acres are calculated from the resulting polygon, which is all new ground disturbance.

Affected Leks within DDCT Analysis Area: The total number of leks where any portion of the No Surface Occupancy area is within the DDCT Analysis Area.

Lek Distances: The shortest distance between the Preliminary Disturbance and any active leks with 4 miles of the Preliminary Disturbance.